In the Claims:

The claims are as follows:

1. (Previously Presented) A method, comprising:

providing a first semiconductor device;

analyzing the first semiconductor device to determine at least one critical dimension error within the first semiconductor device;

determining from said at least one critical dimension error, a dose of electron beam exposure to correct the at least one critical dimension error during a subsequent process to form a second semiconductor device, said subsequent process comprising;

providing a semiconductor structure, wherein the semiconductor structure comprises a photo resist layer on a semiconductor substrate;

forming a plurality of features in the photo resist layer, wherein at least one feature of the plurality of features comprises the at least one critical dimension error;

correcting the at least one critical dimension error by selectively exposing only the at least one feature comprising the critical dimension error to an electron beam comprising said determined dose of electron beam exposure.

2. (Previously Presented) The method of claim 1, wherein the dose of electron beam exposure comprises a power level for the electron beam for a specified amount of time.

3. (Original) The method of claim 1, wherein said correcting the critical dimension error

comprises decreasing a size of the at least one feature.

4. (Previously Presented) The method of claim 1, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

5. (Original) The method of claim 1, wherein said analyzing comprises measuring a plurality of critical dimensions within the first semiconductor device to determine the at least one critical dimension error.

6. (Original) The method of claim 1, wherein said analyzing comprises performing a functionality test of the first semiconductor device to determine a plurality of operating conditions for a plurality of electrical components within the first semiconductor device.

7. (Previously Presented) The method of claim 1, wherein the at least one feature includes a first feature and a second feature, said method further comprising forming a trench in a space in the semiconductor substrate that is located between the first and second features.

8. (Original) The method of claim 1, further comprising forming an electrical component in a

space in the second semiconductor device that is defined by the at least one feature.

9. (Original) The method of claim 8, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

10. (Previously Presented) A method, comprising:

providing a mask and a semiconductor structure, wherein the semiconductor structure comprises a photo resist layer on a semiconductor substrate;

measuring on the mask, a plurality of critical dimensions within a pattern on the mask to determine at least one critical dimension error within said pattern;

propagating radiation through the mask to expose the photo resist layer to form a plurality of features in the photo resist layer, wherein at least one feature of the plurality of features comprises the at least one critical dimension error from the pattern on the mask;

determining from said at least one critical dimension error from the pattern on the mask, a dose of electron beam exposure that will be used to correct the at least one critical dimension error for the at least one feature comprising the at least one critical dimension error; and

correcting the critical dimension error by selectively exposing only the at least one feature comprising the critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the critical dimension error of the at least one feature.

11. (Original) The method of claim 10, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

12. (Original) The method of claim 10, wherein said correcting the critical dimension error comprises decreasing a size of the at least one feature.

13. (Previously Presented) The method of claim 10, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

14. (Previously Presented) The method of claim 10, wherein the at least one feature includes a first feature and a second feature, said method further comprising forming a trench in a space in the semiconductor substrate that is located between the first and second features.

15. (Previously Presented) The method of claim 10, further comprising forming an electrical component in a space in a semiconductor device that is defined by the at least one feature.

16. (Original) The method of claim 15, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

17. (Previously Presented) A method, comprising:

providing a semiconductor structure, wherein the

semiconductor structure comprises a photo resist layer on a semiconductor substrate;

forming a plurality of features in the photo resist layer;

measuring a plurality of critical dimensions of the plurality of features to determine at least one critical dimension error for at least one feature of the plurality of features;

determining from said at least one critical dimension error, a dose of electron beam exposure to correct the at least one critical dimension error for the at least one feature of the plurality of features;

correcting the at least one critical dimension error by selectively exposing only the at least one feature comprising the critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the critical dimension error of the at least one feature.

18. (Original) The method of claim 17, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

19. (Original) The method of claim 17, wherein said correcting the critical dimension error comprises decreasing a size of the at least one feature.

20. (Previously Presented) The method of claim 17, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

21. (Previously Presented) The method of claim 17, wherein the at least one feature includes a first feature and a second feature, said method further comprising forming a trench in a space in the semiconductor substrate that is located between the first and second features.

22. (Previously Presented) The method of claim 17, further comprising forming an electrical component in a space in a semiconductor device that is defined by the at least one feature.

23. (Original) The method of claim 22, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

24. (Previously Presented)A method, comprising:

providing a mask photo resist layer;

forming a plurality of features in the mask photo resist layer;

measuring a plurality of critical dimensions of the plurality of features in the mask photo resist layer to determine at least one critical dimension error for at least one feature of the plurality of features;

determining from said at least one critical dimension error, a dose of electron beam exposure that will be used to correct the at least one critical dimension error for the at least one feature comprising the at least one critical dimension error; and

correcting the critical dimension error by selectively exposing only the at least one feature comprising the critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the critical dimension error of the at least one feature.

25. (Original) The method of claim 24, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

26. (Original) The method of claim 24, wherein said correcting the critical dimension error comprises decreasing a size of the at least one feature.

27. (Previously Presented) The method of claim 24, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

28. (Previously Presented) The method of claim 1, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

29. (Previously Presented) The method of claim 6, wherein said analyzing further comprises comparing said plurality of operating conditions to a plurality of calculated operating conditions

of the first semiconductor device.

30. (Previously Presented) The method of claim 6, wherein said analyzing further comprises comparing said plurality of operating conditions to a plurality of actual operating characteristics of a second semiconductor device known to comprise no CD errors.

31. (Previously Presented) The method of claim 10, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

32. (Previously Presented) The method of claim 17, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

33. (Previously Presented) The method of claim 24, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.